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ABSTRACT

A meeting of the World Health Organization Regional Office for Europe was convened to examine the organization and scope of research in education for health manpower development (HMD). As a prerequisite for the formulation of recommendations, the participants considered the following points: the need for developmental research, the definition of research, areas requiring research, constraints on research, and current research activities in Europe in the area of HMD. Three working papers addressing these issues were presented. Based on these working papers and the deliberations of the participants at the meeting, recommendations were made calling for policies that stress the necessity for research in the education of health professionals in terms of changing health needs; for providing information on the current status and knowledge of HMD research in terms of its purpose, methods, personnel, financing, organization, and outcome; and for proposing alternative strategies and courses of action. In addition, the participants suggested that the regional office institute a research working party to oversee the development of research in the education of health professionals, ensure its priority, and develop the necessary theoretical framework for it. A series of recommendations to member states concerning their role in the facilitation of such research was also made. (MN)

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ЕВРОПЕЙСКОЕ РЕГИОНАЛЬНОЕ БЮРО

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ORGANIZATION AND SCOPE OF RESEARCH IN EDUCATION FOR THE HEALTH PROFESSIONS

Report on a Consultative Group

Prague
28 September - 1 October 1981

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1. Introduction

The meeting was convened by the WHO Regional Office for Europe as part of its programme on health manpower development, and was hosted by the Czechoslovak Socialist Republic.

The Group comprised 13 temporary advisers to WHO from 9 European countries and 2 WHO staff members (see Annex for list of participants).

An address of welcome was delivered by Professor V. Vaček, Vice-Minister of Health of the Czechoslovak Socialist Republic.

The commitment of countries in the European Region to the goal of health for all by the year 2000 calls for a radical improvement in the education and training of health personnel - or health manpower development (HMD). The regional strategy[a] for attaining the goal emphasizes the need to identify the tasks to be performed by such personnel. Such an identification constitutes a necessary part of research into the education of all types of health personnel for new and altered roles. Innovation in HMD requires knowledge of the community's needs and problems, and identification and evaluation of potential solutions and courses of action for attaining them. Research is the only instrument for acquisition of such knowledge on the basis of which appropriate informed decisions may be made.

The broad context of the Group's deliberations was the crucial relationship between research in HMD and improvement in the health of the people. The reason for any educational effort in the field of health can only be the intention of eventually improving health. Therefore, research in HMD must necessarily have that same purpose. It was accepted that health professionals, as they are currently trained and organized, with the functions, roles and relationships they now usually have, are probably not best suited to the task ahead. The implication of this is that new and altered functions, roles and relationships (both interprofessional and between health professionals and the community) are needed. Such qualitative changes can only be effected through appropriate educational effort. In turn, such effort can best be guided by the outcome of appropriate research. Within this context, the Group was asked to advise the Regional Office on the action that should be taken to promote research in the HMD area in the European Region. The Group hence had the task of examining the present situation in Europe with regard to such research and its contribution to the provision of health personnel of the quantity and, more importantly, of the quality needed by the Member States. Further, the Group was requested to indicate what action should be taken at the country level and by the Regional Office to promote such research with the view of attaining the goal of health for all by the year 2000.

As a prerequisite for the formulation of recommendations, the Group considered the following points:

(a) need for development research in HMD;

(b) definition of research in HMD;

(c) HMD research activities in Europe;

(d) areas which require research; and

(e) constraints on research in HMD.

The following working papers were presented:

- Research in the field of education for the health professions in the European Region; present trends, achievements and constraints (by H. Noack).
- Health for all by the year 2000: its meaning in terms of health manpower requirements (by F.M. Katz).
- Some major areas of concern in primary health care nursing education in Europe (by C. de la Cuesta).

[a] Regional strategy for attaining health for all by the year 2000. Copenhagen, WHO Regional Office for Europe, 1980 (document EUR/RC30/8)

2. The need for research in health manpower development

The need for research in HMD was reiterated in May 1977 by World Health Assembly resolution WHA30.43, stating that "the main social target of governments and WHO in the coming decades should be the attainment by all the citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life".[a] Such a target requires a reordering of priorities and commitments at all levels to action, to radical change, and to courageous application of new strategies and approaches in planning and executing health care activities.

Nowhere are these requirements now more pressing than in HMD because manpower represents the most costly resource in the provision of health care and, more importantly, without health professionals who are responsive to the health care needs of the entire community, and without manpower dedicated to and able to function effectively in health promotion, disease prevention, rehabilitation and curative care, the target of health for all by the year 2000 cannot be reached.

Quality, rather than quantity, of health manpower and action in accordance with priorities and requirements, as they emerge from the health needs of the community, will be the key to future improvement in health. The team responsible for primary health care (PHC) is crucial to the achievement of health for all by the year 2000 since health is an integral part of social development and responsibility for health is accordingly being offered to the community and the individual rather than residing with the health professions. In these circumstances, the PHC team is the most likely instrument for educating the community and the individual about health. However, health professionals will require training to work in this new role. Perhaps an entirely new kind of professional will be required.

With these changes in view, the necessary planning, development of strategies, implementation, mobilization of resources, application of effective training processes and utilization of health manpower all contain many crucial "unknowns". Research must facilitate informed decision-making in the areas of planning, training and deployment of health manpower. There is a need to consider the natural history of disease, to break away from technological imperatives and from a concentration on finances and hospitals. There is a need to focus on the PHC team working together in the community as teachers.

The above assumptions were fully endorsed, yet the Group was aware that in doing so they themselves were accepting uncritically certain commonly held beliefs, namely:

- that PHC at community level will be an effective means of educating that community about health;
- that health knowledge is a special type of knowledge, currently belonging to health professionals and not shared by others;
- that the education of health professionals can best occur formally, probably in institutions;
- that health professionals are, and will remain, a special group which will not include other educators, e.g. school teachers, parents, responsible persons in children's organizations, etc.;
- that formal or informal education is an important and effective means of change;
- that policy can be translated into plans.

Some of these often widely held assumptions were seen as questionable and themselves in need of research.

There is thus an urgent need for research at a number of levels, directed towards improvement of the education of health professionals for new and altered roles. This need, however, cannot be seen or acknowledged in isolation from a number of basic, concomitant requirements. If the quantity and quality of research in HMD is to reach a level which permits the systematic accumulation of information for policy formulation, planning, production of health manpower and its management, then it is essential that:

[a] Handbook of Resolutions of the World Health Assembly and Executive Board, Volume II, 4th ed. Geneva, World Health Organization, 1981.

- critical analysis of existing policies and practices is encouraged, and alternatives are actively sought;

- adequate resources are provided and/or present resources are differently apportioned so as to give priority to research that will enable informed decision-making in HMD;

- in every country, appropriate organizations are set up with responsibility for promoting such research and ensuring its relevance to local needs;

- resources are deployed for adequate training of research workers; development of research methodologies is given priority, and continuous evaluations are made of the planning, execution and utilization of the research.

Without research, resulting in clarification of potential alternative paths to improved policy formulation, programming, planning, training and management for HMD, it will not be possible to provide the necessary manpower to meet changing health care needs. Having argued that research is a pressing requirement, it was necessary next to consider whether or not it has a special definition when applied to HMD.

3. The definition of research in health manpower development

To date, research in the area of health has been concentrated on the biomedical sciences (although it must not be forgotten that case studies and the case history are accepted as valuable sources of information in journals of clinical medicine, and as vehicles for learning in both undergraduate and postgraduate courses). The dominant biomedical sciences generally employ a model of research that is based on the prior formulation and subsequent testing of hypotheses derived from some established theory. However, when applied to a complex and relatively new research field, such as the education of health professionals, this research strategy has several shortcomings. Firstly, theories of HMD (in respect of planning, training, utilization, etc.) are currently lacking, and the biomedical research model fails to allow for the initial construction or development of theories and frames of reference. If there are no firm research hypotheses, but only a research question, a problem area that requires some illumination or, perhaps, a need to define a problem or to describe a prevailing situation as a preliminary to formulation of potential solutions, then the biomedical research model is inadequate or inappropriate. A different concept of research would seem to be more suited to this nonbiomedical area.

Research in education of health professionals is probably both more extensive in scope and more diverse in approach than preliminary consideration might suggest. It is broad and diverse in that it encompasses policy formulation, planning, and training programmes and processes. It is also concerned with the subsequent use of trained manpower. If the development of PHC teams working in the community is to be its focus, then it will also be concerned with interprofessional relationships, the division or sharing of tasks among the various health professionals involved, interprofessional communication, and integration into and communication with the community as groups, as families or as individuals. The research approaches to be used or the methodologies to be developed therefore have to be more extensive than those of the traditional biomedical research model. Such approaches and methodologies will not necessarily be characterized by testing hypotheses or application of experimental procedures. For research in HMD, appropriate methods might include:

- the case studies
- surveys
- ethnographic research
- comparative experiments
- philosophical/historical enquiries
- quasi-experimental research.

With the availability of such methods of enquiry, the research is not limited by adherence to a restricted range of methodologies. Instead, the main criterion is whether the problem itself is relevant to HMD activities which themselves must reflect locally identified health needs of the community or, even, of the entire population of a country. It follows that research in HMD should be rooted in real problems found in the field and initially be articulated by those who experience them. With these considerations in mind, the Group defined research in HMD as:

> "Any appropriate process of collection, evaluation and interpretation of information in relation to a defined purpose concerned with the relationship between health manpower development and the improvement of health."

Such a definition implies that research in this area is not monolithic in its approach and methodology, and that the undertaking of a research project is not simply a matter of following through one line of research action. It may well involve many kinds of enquiry and thinking. The problem will determine the method. Should the nature of the problem change, as revealed by the research or enquiry process, then the research process itself must be responsive. The definition also implies that the research process must be appropriate, not only to its purpose, but also to the environment, situation, persons involved, etc. This does not mean to say, however, that HMD research can justifiably be undertaken and pursued without due attention to issues of known reliability, validity and representativeness of the data. According to circumstances, these issues will vary in importance. But in all circumstances, it is necessary to establish that strength of inference is reflected in equal or greater strength of data. Thus the data themselves are to be evaluated as well as interpreted. Finally, such research should have defined purposes. Given the current apparent paucity of research knowledge and problem definition in the area, such purposes are likely to be varied and might include: problem definition; description; explanation; collection of basic ethnographic or epidemiological data; illumination of attitudes and values; determination of interpersonal and communication skills; identification of needs; evaluation of training programmes; clarification of characteristics, etc. HMD research, therefore, cannot be narrowly defined.

4. Health manpower development research activities in Europe

A review of HMD research activities in Europe is handicapped by the apparent lack of appropriate journals or other publications in which such work may be reported. Therefore, a literature or publications review gives, at best, an incomplete picture of the research activities. Unfortunately, it is difficult to estimate either the true degree of this incompleteness, or the representativeness of the research that is reported in journals. There is clearly a need for an international publication devoted to HMD research. In the absence of such a publication, however, the Group considered three available sources of some information: international journals in fields related to or overlapping with HMD research; conference proceedings; and personal knowledge. It must be emphasized that none of these sources is considered to be either fully representative or reflective of either the amount or the extent of research in the area. They are, however, representative of shared knowledge on the basis of which reasonable judgments about the need for further research can be made.

The major journal reviewed was "Medical Education" (four annual volumes from 1977 to 1980), which is the journal of the British Association for the Study of Medical Education. The "International Journal of Nursing Studies" and the "International Nursing Review" were also consulted. In "Medical Education", it was found that about 31% of the 281 articles published dealt with educational topics, particularly in relation to course programmes, instructional media and techniques; evaluation procedures such as multiple-choice tests, problem-based or discipline-centred examinations; and computer-assisted systems. About 26% of the articles described new curricular units, courses or educational objectives in traditional subjects (e.g. orthopaedics, psychiatry, neuroanatomy) as well as in new subjects (e.g. general practice, behavioural and social sciences, sexuality). About 20% of the articles reported on the assessment of behaviour or attributes of medical students, of their performance in tests of knowledge or skills, or of their attitudes towards medical education, health care or professional careers. About 7% of the articles reported on educational institutions and addressed such issues as selection of students and educational reforms. About 6% of the articles dealt with teachers, their pedagogical competencies and their training in the field of education. Finally, about 6% of articles dealt with professional work and focused on a variety of issues such as communication and problem-solving in patient care.

Although clinical and social science journals occasionally publish work on medical education or aspects of health care, it would seem from the above that HMD issues are rarely reported on. Empirical or analytical work on such problems as those related to the context and process of medical education, or to the relationship between education and health care, is rarely reported. Unfortunately, articles and reports on research in the education of dentists, pharmacists, laboratory technicians, social workers and other professional groups working in health were not reviewed. However, available German literature would suggest that very little research has been done in these fields, at least in German-speaking countries.

After medical education, nursing education seems to be the second field where educational research has a certain tradition. Although a thorough literature review was not undertaken, the contents of the "International Journal of Nursing Studies" and the "International Nursing Review" seem to indicate that, as in medical education, research in nursing education has focused on

educational methods, the curriculum and the characteristics of nursing students. However, it would also appear that, unlike research in medical education, a relatively large number of studies of nursing deal with the analysis, empirical investigation and assessment of professional work, or with the nursing process, its institutional context and the underlying concepts. For example,there have been several studies of patient needs in nursing care, of the nature of problem-solving in nursing (a topic also found in the medical field), and of the role of the nurse and her interaction with patients.

Another difference between educational research in these two professional fields seems to be that social science studies of the institutions, professional work and professional education of nurses play an important role in nursing as an academic discipline, and hence in nursing as a profession. Thus, behavioural and social science research might eventually play a role in nursing similar to that played by biomedical research in medicine. In countries where nursing is well advanced as a profession, such as the United Kingdom, a number of theses have already been written on the learning process, on the performance of student nurses, on the acquisition of professional approaches and skills, professional self-image and professional socialization, and on the relationship between professional education and practice.

Apart from journals, a number of studies on the education of health professionals have been published which are wider in scope and incorporate some theory. For example, an extensive empirical investigation has been made in a longtitudinal study of professional socialization in four health occupations: medicine, dentistry, pharmacy and nursing.[a] This study investigated changes in the student's image of professional roles with regard to people, status and science, through the process of professional training, from some point before the start of socialization (training) to just before the student's entry into practice. Other published studies have dealt with: the role and image of the nurse in hospitals and in the community; medical paradigms and their implications for medical education based on research into morbidity and illness behaviour; the development of a new examination system in Switzerland with an analysis of the aims of medical education in the context of health needs, and the relationship between the medical curriculum and the control of teaching and learning.

Group members added their comments and contributions to the statement concerning published research. It was pointed out that there are a large number of research institutes in Europe that are working in HMD but do not submit reports to the journals received. In the United Kingdom considerable related research work has been undertaken and extensively published by the Department of General Practice at the University of Manchester. The British Open University and the Royal College of General Practitioners are seriously discussing the possibility of establishing a primary care unit for research and the production of learning materials. In Yugoslavia, systematic data on PHC began appearing as long ago as 1971. At Maastrich, Netherlands, research is integrated with other, more routine pursuits and is not reported in public forums. In Hungary, educationalists, doctors and health service managers work together in medical education. In the Slovak Socialist Republic, five health manpower development research projects are included in the medical and pharmaceutical research plan coordinated by the Ministry of Health. In 1976, the Czech Socialist Republic established a committee for research in education for the health professions. The research plan of this committee is drawn up for a five-year period and covers three research areas: profiles and models of health manpower in relation to the needs of health services; methodology of the teaching/learning process; evaluation of students, training programmes and the whole system. Participating in this effort are departments or groups from faculties of medicine and pharmacy, schools for middle-level health personnel, and basic and postbasic institutes. Past and present areas of research include:

- a survey of the postgraduate vocational training of community paediatricians and community dental surgeons;
- a longitudinal sociological and psychological study of a cohort of medical graduates, including reference to factors affecting their career choice and adaptation to service conditions;
- a survey of the tasks and responsibilities of pharmacists, aimed at the adaptation of undergraduate and postgraduate training programmes;
- a survey of the scope and quality of the professional activities of community paediatricians, aimed at determining the adequacy of training programmes.

[a] Shuval, J.T. Professional socialisation and medical care. In: Noack, H., ed., Medical education and primary health care. London, Croom Helm, 1980, pp. 161-175.

This brief review of research activities in the education of health professionals allowed the Group to draw certain conclusions. On the positive side, some understanding was gained of the context and process of professional education and training in health, and it was found that in some European countries there clearly already exists a potential for the development of further research activities. On the negative side, however, it appeared that most research is not related to the major challenges for health professionals in the future.

According to the Regional Strategy for Attaining Health for All by the Year 2000, these challenges are: the promotion of lifestyles conducive to health, reduction of preventable conditions, and the provision of adequate, accessible and acceptable health care for all with the stress on PHC. So far, HMD research seems not to have addressed itself sufficiently to questions which need to be answered if professional education is to help significantly in solving health problems of the community. It also appears that HMD research has, so far, not contributed largely to the formulation, implementation and evaluation of health and educational policy or to the education and training of teachers. Such research has not yet developed sufficient coherent knowledge or relevant theory to help decision-makers, teachers and students in the health professions to define, analyse and solve educational problems as they relate to improvement in the health of the community.

5. Areas which require research

Given the current lack of published knowledge, coordinated research and relevant theory, the Group endorsed the following statement of research problems which had already been identified by national authorities or had been identified by the WHO secretariat as obstacles to the achievement of programme objectives:

- how to estimate or forecast future manpower requirements, i.e. to identify needs for different types of health worker or of competencies to provide effective health services;
- how to bring into closer or more functional relationship the planning, production and management of health manpower;
- how to involve the community more actively in the planning, production and management of health manpower;
- what mechanisms should be employed to ensure effective coordination between those responsible for health services and HMD, and between these and other sectors relevant to health development;
- what information is essential to plan and evaluate HMD programmes;
- which indicators of progress are appropriate, feasible and relevant;
- how can an effective recruitment/selection policy be developed and introduced;
- how can effective new educational programmes be planned that will prepare future health workers to take responsibility for health care of entire populations;
- how can changes be made in existing educational institutions or educational programmes;
- what reward systems for teachers are appropriate to ensure optimal effectiveness of this resource;
- how can continuous education or life-long learning be stimulated;
- what mechanism is appropriate for faculty development, e.g., training of teachers and upgrading of competence;
- what organizational structures are appropriate to ensure the effective functioning of educational institutions.

To this list, the Group added the following examples of the types of problem which require some study in the European Region:

(1) Processes for identifying research problems at the local level. If PHC is to be related to need, then a means of identifying that need, at the local level where it is experienced, should be found. How will this be done and by whom?

(2) Methods of estimation and forecasting of the quality and quantity of future health manpower requirements. New and altered roles and tasks might make it necessary to take into account a new set of factors or parameters when planning for the future profiles and deployment of health professionals. The relative importance of current skills and knowledge might change. New skills and knowledge might be required. Further, the new and altered roles and tasks might require a different distribution of the various health professionals involved. Thus estimation and forecasting of health manpower requirements in such altered circumstances becomes problematical.

(3) Identification of the essential competencies of PHC manpower and of the characteristics and implementation of the necessary special PHC training programmes. Although the essential competencies of PHC manpower could already be identified in terms of the knowledge base, psychomotor and communication skills, attitudes and values of the various health professionals, such a broad outline would be insufficient for detailed planning of educational programmes and their implementation. The balance of specialist skills and knowledge of each type of health professional might require some readjustment in the PHC context. Essential competencies might now include those concerned with working in groups and with interprofessional communication. Management and interpersonal skills might acquire increased importance. The ability to analyse local health needs within the community or to respond appropriately to health demands might become essential competencies, as might the ability to deal with groups of people, rather than individual patients or families. All these possibilities remain, at present, crucial unknowns. Without their illumination, special PHC training programmes are unlikely to be fully effective or, more importantly, appropriate.

(4) Identification and implementation of appropriate content/subject matter for training teachers and educational research workers, including problem-solving processes. The question of the provision of special PHC training programmes (discussed in para. (3) above), will not be fully answered until associated issues of who is to deliver or mediate the training programmes and what knowledge, skills and attitudes they should possess are addressed. The development of a new kind of training programme implies also the development of new kinds of trainers or teachers having deep and probably practical understanding of the circumstances and competencies of PHC delivery and the skills required in this area. The questions also arise of who such teachers should be, what would constitute an appropriate background, how they should be trained, whether they should have repeated field experience, what professional background they should have, etc. It is also reasonable and important to ask whether teaching for multiprofessional practice should also, itself, be a multiprofessional undertaking. A further requirement in this area is for training the educational research worker whose efforts will inform the practice of the trained PHC teacher. The necessary knowledge and skills of such a person also remain largely undefined. The definition of research given in section 3 and the associated discussion might guide our initial thinking, but further specification of research approaches and the necessary accompanying skills of the researcher (e.g. participant observation, interviewing, content analysis, etc.) is required. It is also necessary to consider whether or not the research worker should be a subject specialist or health professional in his/her own right, and if so, of what kind? Would different research tasks require different research workers? If so, would they require different training programmes? Again, these remain crucial unknowns which themselves require research.

(5) Development and evaluation of appropriate common core learning materials. New training programmes for PHC workers will require new learning materials. It is a reasonable assumption that old learning materials will not be suited to new circumstances. The Group also considered it as reasonable that those sharing the common experience of working within a group would require some common learning materials.

(6) Processes for maintaining the professional competence of paramedical team members. The Group felt that, whereas medical professionals almost invariably have available to them a variety of sources of continuing education and updating of knowledge (whether through drug and other industrial companies or their own professional organizations and specialist journals), paramedical health professionals often have little or no such assistance. Although such a situation is undesirable in absolute terms, within the context of the PHC team, introduction of the necessary educational mechanisms could constitute a particular problem.

(7) Conditions necessary for development of the PHC team as a vehicle for its own continuing education. It was felt that in the context of PHC, a valuable source of continuing education could be the team itself. The education would thereby be responsive to the needs and problems of the team and the latter would assist in its own development as a multiprofessional group. Thus, continuing education would be rooted in the experiences of the team. However, certain conditions might be necessary for such a process, as well as certain resources (books, journals, etc.), certain pedagogical or facilitative skills, and certain forms of practical experience. Sometimes outside assistance might also be required. Such conditions require investigation.

(8) Introduction and nature of the necessary new and altered relationships, tasks and roles of health professionals working in PHC teams. The need for research into the nature of new and altered relationships, tasks and roles is partially discussed in para. (3) above. However, it can be added that such research will involve going out into the recipient or relevant community as well as into the health professions themselves. It is also worth noting that "new" and "altered" relationships, tasks and roles are referred to here. The question has already been posed as to whether new versions of the existing health professions are required (i.e. "altered") or whether an entirely different kind of profession will be required (i.e. "new"). Similarly, the terms "new" and "altered" can be applied to relationships, tasks and roles. However, such new and altered roles will not, possibly, be achieved as a matter of course. Traditions and special interests, as well as the need to change previous behaviours (and possibly attitudes, values, perceptions and beliefs) might be powerful forces operating against change or, at least, obstacles to it. Even where these do not constitute a problem, the necessary skills and knowledge (also discussed in para. (3) above) might be lacking. The establishment and introduction of PHC teams, being a crucial and perhaps difficult process, is therefore of importance for research and planning.

(9) Introduction and nature of new and altered relationships, tasks and roles of health professionals and the lay community. The successful introduction of PHC is, possibly, as much dependent upon the community as it is upon the PHC team. It presupposes the acceptance and understanding of new roles, responsibilities and attitudes among the community. The relationship and distribution of tasks between lay people and health professionals must change if responsibility for health is accepted by the community and the individual. This redistribution has, as yet, not been defined. Equally, its manner of introduction and the forms and content of preliminary and continuing education and communication between the PHC team and the community have still to be investigated and planned. Likewise, the possibilities for interaction must also be determined.

(10) Individual and community attitudes towards accepting responsibility for one's own health. It cannot be assumed that responsibility for health is the gift of health professionals. For the transaction to be complete and the new situation to prevail, that responsibility must be accepted. Individual and community attitudes towards this are therefore likely to be instrumental. Only when these attitudes are understood can rational plans be formulated for the introduction of altered patterns of responsibility for health.

(11) Introduction of changes in organizations, institutions and bodies responsible for policy formulation, planning and production for HMD. The Group considered that such changes could be reflected in higher levels of organization, management and decision-making.

(12) Relationships between major agents, factors and processes having an impact on health manpower. In the first instance, such agents, factors and processes at all levels require identification. Their relationship must then be analysed and understood to ensure their effective contribution.

(13) Relationships between multiprofessional training, better quality of services and improvement in the health of the community. The arguments for multiprofessional training have, so far, rested on the assumption that "learning together for working together" is likely to be a successful policy. It is further assumed that different health professionals working together in PHC teams will have a beneficial effect upon the health of the community by providing better and more appropriate services. Although such arguments seem plausible, they are not, without research, of proven validity.

(14) Recruitment, selection and orientation policy. The Group agreed that, just as the tasks, skills and characteristics of the trained members of the PHC team should be clearly defined, so too should the skills and characteristics desirable in those accepted into the training programmes. On the basis of this, an appropriate recruitment, selection and orientation policy could be adopted.

(15) Identification of necessary prevailing local conditions for constituting and training a PHC team. It cannot be assumed that all local conditions are equally conducive to the successful creation and training of a PHC team. Neither can it be assumed that all local communities are open to the possibility of PHC. Both conditions and potential problems require research so that inappropriate targets or projects are not established.

(16) Motivations of health professionals for and against personal involvement in HMD research. Some members of the Group had already experienced reluctance amongst health professionals to become involved in HMD research. This seems to be related to its apparently low status in comparison with biomedical or clinical work, the lack of associated career structure and, possibly, the requirement to think and work in new, unfamiliar ways and to gain a new knowledge base. However, future research in the education of health professionals will almost certainly

require the contribution of health professionals. It is therefore necessary to determine the factors which motivate professionals for and against this work in order to enhance the motivating and make allowance for the demotivating factors.

The above 16 items represent the major concerns of the Group with regard to the needs for research in the area of education for the health professions. However, other areas were also identified, namely:

- the effects of involvement of teachers in field work and practice in the community on the quality and outcome of teaching;
- the need for biomedical engineers, technical workers and other nonmedical and managerial professionals in health services.
- the need for and nature of new roles in relation to preventive medicine and health promotion;
- the identification of skills and knowledge in basic sciences relevant for PHC manpower;
- the promotion of effective professional relationships between PHC teams and hospital-based specialists;
- the training of health professionals to act as advisers to administrative bodies;
- the involvement of professional organizations in changes in PHC;
- the need to enhance the influence of behavioural and social sciences in the training of PHC manpower;
- the promotion of understanding and collaboration between educational institutions and health service managers.

Having identified those areas which require research, the Group then considered factors which might prove to be barriers to initiation or completion of the research projects themselves.

6. Constraints on research in health manpower development

Current apparent gaps in knowledge in the areas identified above represent constraints on rational change since if knowledge is not available as a basis for making informed decisions, such decisions either will not be taken or will be taken under ill-informed conditions. However, the Group was of the opinion that constraints are also likely to exist on the undertaking of HMD research itself.

The present dearth of research activities in education of health professionals is in itself a reflection of the priority allocations. The resources available for research in the area of health services and HMD are minute in comparison with those available for the development of new, highly sophisticated technology which, at best, serves a very small percentage of the population. It is minute in comparison with the support available for biomedical research. Resources are more likely to be used to establish research units in tertiary hospitals, rather than to support enquiries into approaches to more effective training or more effective provision of health care. Yet resources for research workers who have adequate competence, and for research institutions with the necessary facilities, are prerequisites for the development of research. Also important is a readiness to accept the possibility that what is done now is not necessarily appropriate. Resistance to possible alternatives to present practices is a constraint that is particularly marked in the area of HMD research.

The position is further aggravated by the prevailing ethos which accords research in HMD, as well as health services, lower priority than that accorded to research in new technology. This ethos is not helped by the training of many senior health officials, which is often reflected in an orientation towards curative technologies, an unease with social/behavioural research, and hence a reluctance to give priority to research in HMD.

In addition, perhaps because of the prevailing belief or value system, few ministries of health have set up a body with responsibility for research in HMD. Little research interaction takes place with the potentially relevant non-health institutions which do exist and in which some work is already undertaken. Few social scientists with competence in HMD research have been recruited into health ministries and/or organizations directing research at national level.

Certain other reasons for the present low priority and status of research in the education of health professionals can also be suggested. One might be that there is no perceived need for HMD research because there is no rational or coordinated educational policy in the field of health that would require the data, knowledge and theories produced by such research. This is likely to be the case in countries where policy and planning for the education and training of the health professions are not the responsibility of the ministry of health, but of different bodies having different interests, for example the ministry of education and professional organizations. In fact, a critical scientific analysis of education and training for the health professions might even upset the balance between the interests of the organizations and groups involved.

A related reason might be that there is no perceived need for research in the education of health professionals because, in most European countries, teachers in the health sciences are not trained in educational theory and methods. In general, the essential prerequisite for an academic career in medicine is successful work in biomedical research; involvement in educational research does not count for much and may even be a hindrance. This might be different in academic nursing, where educational research might be considered as a specific type of nursing research.

Another reason may lie in the relative autonomy of and the boundaries between the scientific and practical or clinical disciplines that share responsibility for education and training for the health professions. Depending upon its scientific status and its degree of autonomy, each discipline tends to have its own educational culture and practices, besides its own body of knowledge, methods, professional values and norms. To the extent that this is the case, educational research is likely to be viewed as a challenge to such autonomy and therefore to engender anxiety and resistance.

A reason already touched on might be the lack of a sufficient institutional basis and adequate funds for educational research, as well as a shortage of competent research workers. As such research tends to take the form of labour-intensive social science research, frequently requiring cross-institutional as well as longitudinal studies, it can be undertaken only if certain minimal resources are available.

Accepting these factors and circumstances, the following synthesis was made of major constraints on or obstacles to the successful initiation or completion (or, indeed, application) of research in HMD in Europe.

(1) There is a general lack of knowledge at all levels of the scope, purpose, need for and methods of research in the education of health professionals; in particular, decision-makers are often unaware of the value of HMD research.

(2) The constitution of the present finance-allocating and decision-making bodies tends to be weighted against nonbiomedical research. This reflects the difficulty of establishing such research within a health system dominated by biomedical research concepts and criteria.

(3) There is a lack of adequate research institutions and trained research workers to undertake the necessary studies. The conventional research system and traditions cannot accommodate such work. Moreover, there is not an associated career structure for young health professionals wishing to become involved in HMD research.

(4) There is often no unified body of decision-makers or any coordinated system of responsibility for HMD research. In addition, the multiplicity of decision centres in fragmented health services operates against HMD research.

(5) The status of paramedical professions remains low in comparison with that of the medical profession, and research money and efforts tend to accrue to high-status areas.

(6) Research in the education of health professionals is likely to require, as a sine qua non of action research, the participation of those who are the subjects of the studies. While HMD research remains low in status, alien in its concepts and methodologies and threatening to position, beliefs or values, such participation is unlikely to be achieved.

(7) HMD research is potentially threatening to the status and autonomy of various groups and disciplines. That threat can induce active hostility towards such research, or those who wish to be, or are involved in it.

(8) There is neither a fully developed methodology nor a comprehensive framework for HMD research. Concrete or fully-comprehensive arguments, therefore, are difficult to put forward for those who have little knowledge or experience in the field to understand or accept. This is

inevitable in a relatively new area of burgeoning importance, where parameters and problems are still in a relatively inchoate state. In view of the necessarily interdependent and sometimes possibly contemporaneous relationships between problem identification, methodological development, data collection and interpretation and theory building in relation to methods and data, it is important to establish the basic premises for HMD research in action. Such an approach is not reflected in biomedical or traditional research models and concepts.

(9) Lack of knowledge, training and traditions in educational theory and research results in discouraging or negative attitudes among key middle-line managers at local level, where research might be undertaken. Action research, as discussed in para. (6) above requires the cooperation of those who are being studied; it also requires the cooperation of "gate-keepers" at the site of the research, who can either allow or obstruct the progress of research and access to appropriate sources of data (people, records, events, etc.).

(10) HMD research requires collaboration and cooperation between different professionals who are used to working independently. These professionals might be from different areas of health care or from educational institutions, or they might be social scientists (sociologists, health economists, psychologists, anthropologists, etc.). Differences in status, power, authority, assumptions, knowledge, experience, traditions, attitudes, approaches, behaviours, etc., might all cause difficulty in developing a common task orientation and cooperative or interactive methods of work.

(11) HMD research requires the long-term commitment of finance and research workers.

(12) There is no international publication for HMD research. This is an important constraint for two main reasons. Firstly, developments will be considerably retarded if each nation or research group must work in relative isolation from others who are addressing similar problems. Duplication of effort might also occur. Secondly, part of the career process and assumed opportunities of research workers concerns publication of work. Any area in which journal publication is an improbable outcome is unlikely to be attractive to many professionals.

Having completed this exercise, the Group had identified, clarified and discussed the needs for HMD research in Europe; had considered the nature, probable characteristics and meaning of such research and had formulated an appropriate definition of it; had reviewed the current state of HMD research activities in Europe; and had identified the probable, possible and actual constraints on the successful initiation and completion of HMD research projects. With this background and these considerations in mind, it felt able to make appropriate and feasible recommendations.

7. Recommendations

The Group was convinced of a pressing need to undertake research in HMD, as a prerequisite for finding and implementing solutions to current problems. It was also concerned about the present situation in Europe where, apparently, relatively little research in HMD has been or is being conducted. Therefore, the Group strongly recommended to Member States and to the Regional Office that the following action be taken to ensure performance of the research necessary for effective and efficient education and training of health manpower.

A. Recommendations to the WHO Regional Office for Europe

1. The Regional Office might encourage awareness and action in Member States by informing and motivating them about the importance of HMD research, in particular by:

(a) stressing the necessity for research in the education of health professionals in terms of changing health needs;

(b) providing information on the current status and knowledge of HMD research in terms of its purpose, methods, personnel, financing, organization and outcome;

(c) pointing out the major implications of such research in terms of institutional and personnel development and organization, financial support of long-term effort, etc.;

(d) proposing alternative strategies and courses of action, e.g., establishment of special institutes to provide a basis for continuity of research; provision of special career structures for research workers within current institutions;

(e) encouraging governments to provide HMD research in all appropriate centres, institutions and organizations at the country and international level.

2. The Regional Office might follow its normal practice in promoting training by directing effort towards multiprofessional courses in HMD research. The content of such courses might appropriately cover: (i) the training of teachers who will instruct people entering PHC teams; (ii) research methodology. Such courses could be introductory or refresher. Teachers would have to be carefully selected.

3. The Regional Office might institute a research working party to: (i) oversee the development of research in the education of health professionals; (ii) ensure its priority; (iii) develop the necessary theoretical framework.

B. Recommendations to Member States

1. Member States might consider creating a special committee or council charged with promoting research in the education of health professionals by: (i) defining priorities in HMD research; (ii) allocating funds for this research; (iii) disseminating the results of the research as a basis for informed and relevant decision-making; (iv) facilitating application of the results of this research. Such a committee or council might include representatives of the health services responsible for promoting PHC; representatives of PHC professionals; representatives of the system for health manpower education; representatives of the consumers of PHC; persons with expertise in HMD research.

2. Member States might create a stable network of institutions, task groups or centres with responsibility for: (i) implementing research; (ii) training research workers; (iii) disseminating and transmitting the results of the research, possibly through the special committee or council referred to in recommendation B1 above.

3. Member States might sponsor multiprofessional research on the impact of changing health policy, patterns of health care and acceptance of responsibility for health by the community and by individuals.

4. Member States might consider utilizing available WHO funds under their respective country allocation, for fellowships to study research in the education of health professionals.

5. Member States might promote conferences, meetings, working groups, etc., on HMD research.

6. Governments and/or professional organizations might encourage research and development activities in relation to the education of health professionals by: (i) creating special groups to investigate the need for common core learning materials for present and future PHC team workers; (ii) financing the production and evaluation of effective and economical learning materials; (iii) publishing the results of their experiences.

7. Information transfer and exchange in the European Region might be effected by regular, frequent and fast publication and dissemination of brief reports. This responsibility could be undertaken by institutions, publishers or professional organizations.

8. The basic and postbasic education of every health worker should include a training period involving experience of HMD research, with emphasis on evaluation of health care.

9. Authorities, responsible persons and groups might encourage any initiative and active involvement of consumers in planning and executing HMD research.

Annex

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